

Request for Reconsideration:

Applicant acknowledges with appreciation that the Examiner indicates that claims 3-16 would be allowable if rewritten in independent format, including the limitations of their base claims and any intervening claims. Applicant respectfully requests that the Examiner reconsider the above-captioned patent application in view of the following remarks.

Remarks:

1. Rejections

Claims 1 and 2 stand rejected under 35 U.S.C. § 103(a), as allegedly being rendered obvious by U.S. Patent No. 5,624,240 to Kawaguchi et al. (“Kawaguchi”) in view of U.S. Patent No. 5,513,553 to Gleasman et al. (“Gleasant”). Applicants respectfully traverse.

2. 35 U.S.C. § 103(a)

Claims 1 and 2 stand rejected as allegedly being rendered obvious by Kawaguchi in view of Gleasman. In order for the Office Action to establish a prima facie case of obviousness, at least three criteria must be met. First, there must be some suggestion or motivation, either in the combined references or in the knowledge generally available to one of ordinary skill in the art, to combine the cited references in the manner proposed by the Office Action. Second, the prior art references must disclose or suggest all the claim limitations. Third, there must be a reasonable expectation of success. MPEP § 2143. In view of the following remarks, Applicant respectfully submits that the Office Action fails to establish a prima facie case for obviousness.

As a threshold criteria, the references used to establish the prima facie case of obviousness must be analogous art to the challenged invention. MPEP § 2141.01(a). In order for a reference to be analogous art, the reference must satisfy one of two criteria. First, the reference may be “in the field of the applicant’s endeavor.” Id. Alternatively, the reference may be “reasonably pertinent to the particular problem with which the inventor was concerned.” Id. Specifically, “[a] reference is reasonably pertinent if, even though it may be in a different field from that of the inventor’s endeavor, it is [a reference] which, because of the matter with which

it deals, logically would have commended itself to an inventor's attention in considering his problem." Id. Applicant respectfully submits that Gleasman is non-analogous art with respect to the claimed invention, and as such, may not properly be combined with Kawaguchi.

Specifically, Gleasman relates to high-speed, high-pressure hydraulic machinery that is not related to refrigerant compressors. Moreover, Gleasman states that it is not analogous to the field of refrigerant compressors:

We use the term 'non-analogous' art because automotive and industrial hydraulic machines run at high speeds e.g., 2000 rpm) and high pressure (e.g., 6,000 psi), and persons skilled in the design of such machines do not consider low speed/low pressure refrigerant gas compressors to be part of the same art.

Gleasant, Column 2, Lines 46-52. Gleasant's machines and the refrigerant compressors described in this application operate in different environments, with different speeds and different pressure conditions. The Office Action asserts that "Gleasant discloses that although the running speeds of hydraulic high-pressure compressors are very different from refrigerant compressors, there are common elements used in both. The determining means for determining the inclination angle of the swash plate and the releasing means, both of which are relied upon, are disclosed by Gleasant, are not affected by the speed of the compressor and, therefore, are interchangeable between hydraulic and refrigerant compressors." Office Action, Page 5, Lines 7-13. Therefore, the Office Action asserts that Gleasant is analogous art with respect to refrigerant compressors. Applicant respectfully disagrees with the Office Action's assertions.

Specifically, the Office Action does not apply a proper standard for determining whether Gleasant is analogous art, i.e., the Office Action fails to establish that Gleasant is either "in the field of the applicant's endeavor" or is "reasonably pertinent to the particular problem with which the inventor was concerned." MPEP § 2141.01(a). For example, Gleasant

clearly states that hydraulic machines are not in the same field of endeavor as refrigerant compressors because “automotive and industrial hydraulic machines run at high speeds e.g., 2000 rpm) and high pressure (e.g., 6,000 psi), and persons skilled in the design of such machines do not consider low speed/low pressure refrigerant gas compressors to be part of the same art.” Gleasman, Column 2, Lines 46-52 (emphasis added.) Moreover, the Office Action fails to establish that hydraulic machines are reasonably pertinent to the particular problem with which the inventor was concerned. Therefore, Applicant respectfully submits that it is improper for the Office Action to combine Kawaguchi and Gleasman.

Moreover, the combination of Kawaguchi and Gleasman does not render the claimed invention obvious. The Office Action admits that Kawaguchi fails to teach the “determining means” and the “releasing means” limitations described in claims 1 and 2, respectively, as well as the “wherein determining means is a stopper” limitation of claim 2. Nevertheless, the Office Action asserts that Gleasman teaches “a determining means (172) for determining the inclination angle of the swash plate to an initial angle when said drive shaft is stopped without being driven by the external driving source . . . and releasing means (180) for releasing the inclination angle determining means when compression work of the compressor is increased” Office Action, Page 4, Lines 4-10. Applicant respectfully disagrees with the Office Action’s assertions.

a. Independent Claim 1.

i. The Combination of Kawaguchi and Gleasman Does Not Disclose or Suggest All of the Limitations of Independent Claim 1.

Applicant's independent claim 1 recites "determining means for determining the inclination angle of the swash plate to an initial angle . . . and releasing means for releasing the inclination angle determining means" Neither Kawaguchi nor Gleasman discloses or suggests the determining means and releasing means limitations set forth in independent claim 1.

The Office Action cites to a portion of the specification of Gleasman as allegedly disclosing a determining means and a releasing means. Nevertheless, that portion merely recites a "small servo mechanism attached to the outside of cylinder housing unit 150a . . . [that] permits the flow of pressurized fluid from input 188 through passageway 189 and passageway 190 (in drive element 162) to the left hand portion of cavity 177 formed in collar 176" while "movement of land 184 of servo-piston 182 opens port 184' within servo-cylinder 185 to connect passageway 192 in housing unit 150a with a fluid drain (not shown)." Gleasman further recites "a wobbler 14 which cooperates with a rotor 16 to form a split swash-plate." Gleasman, Column 7, Lines 1-3. In describing the servo-mechanism, Gleasman further recites that "a control rod 186 formed at one end of servo-piston 182 is movable manually or by well-known means (not shown) to adjust the inclination of the rotor 16' and, thereby, the angle of wobbler 14' [(collectively the "swash-plate"))] and the stroke of pistons 154, 155." Gleasman, Column 17, Lines 18-22 (emphasis added).

Assuming arguendo that the disclosed structure in Gleasman does disclose the determining means limitation of independent claim 1, it clearly does not disclose a releasing

means for releasing the inclination angle determining means. Gleasman does not disclose or suggest that servo-mechanism 180 may release a swash plate. In Gleasman, servo-mechanism 180 merely adjusts the position of the swash-plate (defined as the rotor and the wobbler) therein. If the swash-plate of Gleasman is to be inclined to a minimum angle, control rod 186 must be pushed or pulled to a position corresponding to that angle.

Nevertheless, the Office Action asserts that “the release means [of Gleasman] can adjust the determining means 172 and therefore can adjust it to a released position. Therefore, servo-mechanism 180 can be utilized as a releasing mean.” Office Action, Page 5, Lines 16-19. Thus, the Office Action concludes that because servo-mechanism 180 is configured to adjust determining means 172, servo-mechanism 180 necessarily must be configured to release determining means 172. Applicant respectfully notes that the Office Action has not provided any support for this conclusion as to the operation of servo-mechanism 180 and determining means 172. Moreover, Gleasman merely discloses that servo-mechanism 180 may move determining means 172 to the right and to the left, and does not disclose or suggest that servo-mechanism 180 may release determining means 172. Specifically, Gleasman merely states that:

To reduce the inclination of the swash-plate and the stroke of pistons 154, 155, control rod 186 is moved to the right, causing land 183 of piston 182 to uncover a port 183' that is formed within servo-cylinder 185 and connecting input 188 with passageway 189 in housing unit 150a. The resulting pressure differential across flange 178 moves control piston 174 and toggle-link 172 to the right, causing a follower 195 to move to the right with control piston 174. Follower 195 is fixed to the end of servo-cylinder 185, and the latter continues to move to the right until its ports 183', 184' are once again blocked by lands 183, 184 of servo-piston 182. If control rod 186 of servo-piston 182 is moved to the left, the process just described above reverses: flange 178 of control piston 174 and toggle-link 172 [move] to the left, increasing the inclination of rotor 16' and the stroke of the pistons, until follower 195 moves servo-cylinder 185 and its

ports 183', 184' to a position in which they are again blocked by lands 183, 184 of servo-piston 182.

Gleasant, Column 17, Lines 24-57. Thus, Gleasant merely describes moving toggle-link 172 to the right and to the left, but does not in any way disclose or suggest that servo-mechanism 180 may release toggle-link 172.

ii. The Office Action Does Not Provide Evidence of a Suggestion or Motivation to Combine Kawaguchi and Gleasant.

“Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so” MPEP § 2143.01. Applicant respectfully submits that the Office Action fails to demonstrate a motivation or suggestion to modify Kawaguchi to include the toggle-link and control piston of Gleasant for “determining the inclination angle of the swash plate to an initial angle when said drive shaft is stopped without being driven by the external driving source.” For example, Gleasant states that because of its “inventive structures, our hydraulic machine provides relatively high horsepower in a remarkably small format; i.e., it remarkably exceeds the horsepower densities of present commercially-available units of similar physical dimensions.” Gleasant, Column 5, Lines 18-22. The Office Action has shown no motivation or suggestion to modify Kawaguchi to include the toggle-link and control piston from the small, high power, hydraulic machine of Gleasant to determine the inclination angle of the swash plate in a clutchless refrigerant compressor. Therefore, Applicant respectfully requests that the Examiner withdraw the obviousness rejections of claim 1.

b. Dependent Claim 2.

“If an independent claim is non-obvious under 35 U.S.C. 103, then any claim depending therefrom is non-obvious.” MPEP 2143.03 (citations omitted). Claim 2 depends from allowable independent claim 1. Therefore, Applicant respectfully requests that the Examiner also withdraw the obviousness rejection of claim 2.

Conclusion:

Applicant respectfully submits that the above-captioned patent application, as amended, is in condition for allowance, and such disposition is earnestly solicited. If the Examiner believes that the prosecution of this application may be furthered by discussing the application, in person or by telephone, with Applicant's representative, we would welcome the opportunity to do so. Applicant believes that no fees are due as a result of this responsive amendment. Nevertheless, in the event of any variance between the fees determined by Applicant and the fees determined by the PTO, please charge or credit any such variance to the undersigned's Deposit Account No. 02-0375.

Respectfully submitted,

BAKER BOTTS L.L.P.

By:

Timothy J. Churna

Registration No. 48,340

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Baker Botts L.L.P.
The Warner, Suite 1300
1299 Pennsylvania Avenue, N.W.
Washington, D.C. 20004-2400
(202) 639-7700 (telephone)
(202) 639-7890 (facsimile)

JBA/CJB/tt